03050201-080

(Wando River)

General Description

Watershed 03050201-080 extends through Berkeley and Charleston Counties and consists primarily of the ***Wando River*** and its tributaries. The watershed occupies 74,017 acres of the Coastal Zone region of South Carolina. The predominant soil types consist of an association of the Bohicket-Chipley-Yonges-Kiawah-Chisolm series. The erodibility of the soil (K) averages 0.12 and the slope of the terrain averages 1%, with a range of 0-6%. Land use/land cover in the watershed includes: 64.3% forested land, 13.9% nonforested wetland, 8.9% water, 5.5% urban land, 4.2% forested wetland, 2.3% scrub/shrub land, 0.8% agricultural land, and 0.1% barren land.

The Wando River accepts drainage from the Iron Swamp (Mayrants Reserve), Alston Creek, Darrell Creek, Deep Creek, Toomer Creek, and Wagner Creek before receiving Guerin Creek drainage (Lachicotte Creek, Old House Creek, Fogarty Creek) near Cat Island. The Guerin Creek drainage flows through the Francis Marion National Forest. Johnfield Creek enters the river downstream followed by Horlbeck Creek (Boone Hall Creek), Fosters Creek, Beresford Creek (Martin Creek, Sanders Creek, Hopewell Creek), Ralston Creek, Rathall Creek and Bermuda Creek. Beresford Creek is connected to Clouter Creek in watershed 03050201-050. From the headwaters to a point 2.5 miles north of its confluence with the Cooper River, the Wando River is Classified SFH; downstream of this point to its confluence with the Cooper River, the Wando River is classified SA. Hobcaw Creek (Lake Woodlawn) and Molasses Creek enter the Wando River at the base of the watershed (SFH) near the Town of Mount Pleasant. The Wando River then drains into the Cooper River, which flows into the Charleston Harbor. There are a total of 20.3 stream miles, 70.9 acres of lake waters, and 5,509.1 acres of estuarine areas in this watershed.

Surface Water Quality

Station #	Type	Class	Description
MD-115	P/INT	SFH	WANDO RIVER AT S.C. 41
RO-02014	RO02	SFH	WANDO RIVER, 2.0 MI W OF PHILIP
RO-01162	RO01	SFH	WANDO RIVER, 6.25 MI E OF NORTH CHARLESTON
MD-264	INT	SFH	WANDO RIVER AT I-526 MARK CLARK EXPRESSWAY
MD-198	P/W	SFH	WANDO RIVER BETWEEN RATHALL & HOBCAW CREEKS

Wando River - There are five SCDHEC monitoring sites along the Wando River and recreational uses are fully supported at all sites. At the furthest upstream site ***(MD-115)***, aquatic life uses are partially supported due to occurrences of copper in excess of the aquatic life acute criterion. There is also a significant increasing trend in turbidity. Significant decreasing trends in five-day biochemical oxygen demand and total nitrogen concentration suggest improving conditions for these parameters. At the midstream sites ***(RO-02014, RO-01162, MD-264)***, aquatic life uses are fully supported.

Aquatic life uses are also fully supported at the furthest downstream site ***(MD-198)***, and a significant increasing trend in dissolved oxygen concentration and significant decreasing trends in five-

day biochemical oxygen demand, total nitrogen concentration, and fecal coliform bacteria concentration suggest improving conditions for these parameters. *Fish tissue samples from the lower Wando River indicate no advisories are needed at this time.*

Shellfish Monitoring Stations

Station #	Description
09B-01	WANDO RIVER AT NOWELL CREEK
09B-02	WANDO RIVER AT HORLBECK CREEK
09B-03	WANDO RIVER AT SC HWY 41 BRIDGE
09B-04	WANDO RIVER AT DEEP CREEK
09B-05	WANDO RIVER OPPOSITE BIG PARADISE ISLAND
09B-06	WANDO RIVER AT PARADISE BOAT LANDING
09B-07	BOONE HALL CREEK OPPOSITE COUNTY RECREATION AREA
09B-08	WANDO RIVER AT MARKER #29
09B-09	DEEP CREEK – 1 MI FORM CONFLUENCE WITH WANDO RIVER
09B-10	WANDO RIVER AT ALSTON CREEK CONFLUENCE
09B-11	WANDO RIVER AT GUERIN CREEK
09B-12	GUERIN CREEK AT OLD HOUSE CREEK
09B-14	NORTH EDGE OF SC PORT AUTHORITY/WANDO TERMINAL
09B-15	NEW BRIDGE- ROUTE I-526
09B-16	CONFLUENCE OF MARTIN CREEK AND NOWELL CREEK
09B-17	WANDO RIVER MIDWAY BETWEEN STATIONS 3 AND 11 (AT OLD DRY DOCK)
09B-18	RAT HALL CREEK AT CONFLUENCE WITH WANDO RIVER
09B-19	FOSTER CREEK AT CONFLUENCE WITH WANDO RIVER

NPDES Program

Active NPDES Facilities

RECEIVING STREAM *FACILITY NAME* *PERMITTED FLOW @ PIPE (MGD)*	*NPDES#* *TYPE* *COMMENT*
WANDO RIVER DETYENS SHIPYARDS/WANDO YARD PIPE #: 001 FLOW: M/R	SC0033022 MINOR INDUSTRIAL

Nonpoint Source Management Program

Land Disposal Activities

Landfill Facilities

LANDFILL NAME *FACILITY TYPE*	*PERMIT #* *STATUS*
MT PLEASANT TRANSFER STATION MUNICIPAL	101002-6001 --------

Mining Activities

MINING COMPANY *MINE NAME*	*PERMIT #* *MINERAL*
DIRT CHEAP, INC. KIWI MINE	1165-19 SAND

Growth Potential

There is a high potential for growth projected for this watershed, which contains portions of the Towns of Mt. Pleasant and Awendaw, and the City of Charleston. Some of the major development areas include: Dunes West, Liberty, Rivertowne, Brickyard, Long Point, Belle Hall, and Daniel Island. Water and sewer services are available in all potential growth areas.

Watershed Protection and Restoration

Total Maximum Daily Loads (TMDLs)

Two TMDLs addressing dissolved oxygen were developed by SCDHEC for the ***Charleston Harbor Estuary:*** one covering the Ashley River and the other covering the Charleston Harbor, the Cooper River, and the Wando River. The Harbor/Cooper River/Wando River portion of the system (consisting of the Tail Race Canal, West Branch Cooper River, East Branch Cooper River, Shipyard Creek, Town Creek, Back River, Goose Creek, Wando River and Charleston Harbor) is not considered to be impaired with respect to dissolved oxygen (with the exception of the Wando River monitoring site MD-115); however, available information indicates much of the system does not meet the applicable water quality standard for dissolved oxygen for significant periods of time and is considered water quality limited for the purposes of wasteload allocation (WLA) development. WLAs are an integral part of a TMDL, and although not always developed through the TMDL process, the Department and EPA have chosen to use the TMDL process to develop WLAs for the Charleston Harbor system (see following section). Results of a water quality model indicate the need for a 70% reduction in discharge of oxygen demanding substances to the overall system. A phased approach to achieving these reductions is proposed with an initial Phase I reduction of 60%. For more detailed information on TMDLs, please visit the SCDHEC's Bureau of Water homepage at http://www.scdhec.gov/water and click on "Watersheds and TMDLs" and then "TMDL Program".

Special Models

Charleston Harbor System TMDLs

The modeling efforts for Charleston Harbor and its tributaries have been completed and phased TMDLs for the Ashley and the Cooper systems have been issued by the Department and approved by EPA Region 4. Interim TMDL limits were included in NPDES permits for a number of dischargers while final TMDL limits were included for some dischargers who were already meeting the final limits. Permits included compliance schedules that allowed the opportunity for additional modeling work to be completed before compliance with final limits is required. A group of dischargers working through the local Councils of Government has initiated another modeling effort that is currently underway. If this effort is successfully completed within the allotted time, the existing TMDLs will be revised and, as appropriate, new limits incorporated into NPDES permits for discharges covered by the TMDL.